

Commercial Street Bridge
Spanning the Purgatoire River,
on Commercial Street
Trinidad
Las Animas County
Colorado

HAER No. CO-53

HAER
COLO,
36-TRIN,
3-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park service
U. S. Department of the Interior
P. O. Box 25287
Denver, Colorado 80225

HISTORIC AMERICAN ENGINEERING RECORD

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Commercial Street Bridge

HAER No. CO-53

Location: Spanning the Purgatoire River, on Commercial Street
Trinidad, Las Animas County, Colorado

UTM: 13.543780.4113900
Quad: Trinidad

Date of Construction: 1905

Builder/Designer: Marsh Bridge Company of Des Moines, Iowa

Present Owner: City of Trinidad
City Hall
135 Animas Street
Trinidad, Colorado 81082

Original Use: Roadway bridge

Present Use: Roadway bridge

Significance: After the turn of the century, the preferred alternative to the steel truss for short-span vehicular bridges was generally considered to be the concrete arch. More solid under traffic and better resistant to flooding, it was also valued as more aesthetically refined than the starkly functional truss. The Commercial Street Bridge is a direct representation of that trend in Colorado. The oldest concrete structure in the survey, it is directly associated with two pivotal figures in bridge technology, James Marsh and Daniel Luten, and is the only bridge in Colorado known to have been built by Marsh's company (another, the Rainbow Arch Bridge, MRO3, was designed by Marsh, based on his patent). A regionally-important crossing of the Purgatoire River, it is one of Colorado's most technologically significant spans.

Compilers: Clayton Fraser and Carl Hallberg
Fraserdesign
Loveland, Colorado
September 26, 1983

HISTORY

Under a bridgebuilding program prompted by the Trinidad City Council, the Las Animas County commissioners and the council jointly solicited bids for a wagon bridge on Commercial Street in October 1904 to replace the existing two-span through truss. After rejecting the first set of proposals in December, a second set was submitted to the city council by several bridgebuilders. The \$25,000 construction contract was awarded to the Marsh Bridge Company of Des Moines, Iowa, on January 19, 1905. Of this contract, the county paid two-thirds, the city one-third. Using a concrete reinforcing patent held by Daniel Luten, Marsh built this extremely elliptical filled arch, termed the Luten arch, that year. The bridge still serves as an important access to the Trinidad central business district from the north.

ARCHITECTURAL DESCRIPTION

The Commercial Street Bridge is a segmental, reinforced concrete Luten arch.

Span number:	2
Span length:	70'0"
Overall length:	176'0"
Roadway width:	45'2"
Floor/decking:	concrete
Substructure:	buttressed concrete pier; concrete retaining abutments
Guardrails:	rectangular guardrails; bulkheads and square balusters with incised panels

SOURCES OF INFORMATION

Structure Inventory and Appraisal: TP-18-B. Colorado Department of Highways, Denver, Colorado.

Las Animas County Commissioners' Minutes: October 4, 1904 (Book 11, page 461), December 6, 1904 (Book 11, page 503), January 5, 1905 (Book 11, page 543), April 3, 1905 (Book 11, page 578), May 8, 1905 (Book 11, page 597). Las Animas County Courthouse, Trinidad, Colorado.

National Bridge Company. "Reinforced Concrete Bridges: Luten Patents." n.p.: 1907. Manufacturer's brochure.

Luten, Daniel B. "Arch-Bridge," Patent application filed August 2, 1899. United States Patent Office, Official Gazette of the U. S. Patent Office, Official Gazette of the U. S. Patent Office, November 21, 1911, vol. 172, no. 3.

Builder's plate on bridge: "Built by Marsh Bridge Company, Des Moines, Iowa. 1905. Under Patents of Concrete Engineering Company, New York City" [].

Field inspection by Clayton Fraser and Carl Hallberg, September 8, 1983.